

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
6 October 2005 (06.10.2005)

PCT

(10) International Publication Number  
**WO 2005/093260 A1**

(51) International Patent Classification<sup>7</sup>: **F04D 19/04**

[GB/GB]; c/o BOC Edwards, Kenn Business Park, Kenn Road, Clevedon, North Somerset BS21 6TH (GB).

(21) International Application Number:  
PCT/GB2005/000881

(74) Agent: **BOOTH, Andrew, Steven**; The Boc Group Plc, Chertsey Road, Windlesham, Surrey GU20 6HJ (GB).

(22) International Filing Date: 8 March 2005 (08.03.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
0406748.4 26 March 2004 (26.03.2004) GB

(71) Applicant (for all designated States except US): **THE BOC GROUP PLC** [GB/GB]; Chertsey Road, Windlesham, Surrey GU20 6HJ (GB).

(72) Inventors; and

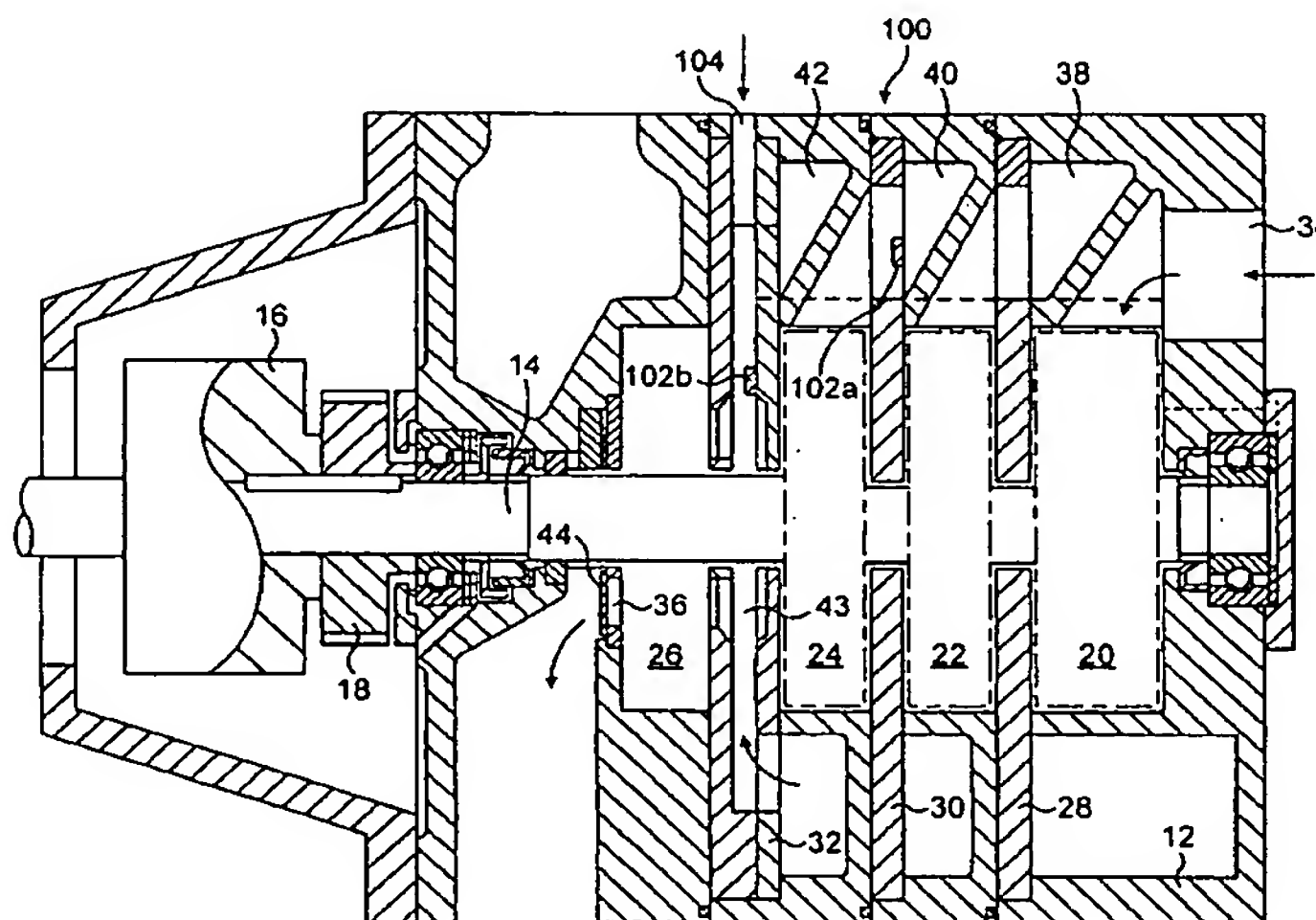
(75) Inventors/Applicants (for US only): **HUNTLEY, Graeme** [GB/GB]; c/o BOC Edwards, Kenn Business Park, Kenn Road, Clevedon, North Somerset BS21 6TH (GB). **SEELEY, Andrew, James** [GB/GB]; c/o BOC Edwards, Kenn Business Park, Kenn Road, Clevedon, North Somerset BS21 6TH (GB). **SMITH, James, Robert**

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

[Continued on next page]

(54) Title: **VACUUM PUMP**



(57) Abstract: A multi-stage vacuum pump comprises, between adjacent stages of the pump, a continuous ignition source for igniting a fuel within a pumped fluid. This can ensure that the concentration of the fuel in fluid exhaust from the pump is below its lower explosive limit.

WO 2005/093260 A1



**Published:**

— with international search report

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*